CLAIM AMENDMENTS

Claims 1 and 2 (Cancelled).

3. (Currently Amended) ~~The~~ A magnetoresistance sensor element ~~according to Claim 2~~ comprising:

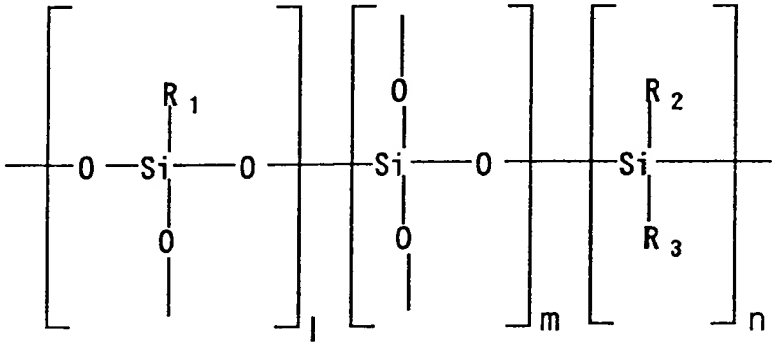
a sensor substrate; and

a sensing portion comprising slender wires supported by the sensor substrate,

wherein

the surface of the sensing portion is covered with a film of a cured silicon polymer,

the silicone polymer of the cured silicon polymer film is represented by the following general formula



~~wherein~~

R1, R2, and R3, which may be the same or different, are selected from the group consisting of an aryl, hydrogen, an aliphatic alkyl, a hydroxyl, a trialkylsilyl, and a functional group having an unsaturated bond,

l, m, and n are integers and $l + m + n \geq 1$, and

the silicone polymer has a weight average molecular weight of not less than 1000.

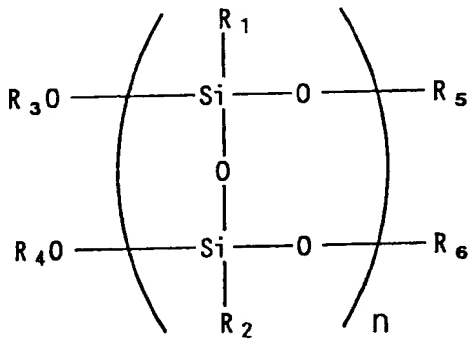
4. (Currently Amended) ~~The~~ A magnetoresistance sensor element ~~according to Claim 2~~ comprising:

a sensor substrate; and

a sensing portion comprising slender wires supported by the sensor substrate, wherein

the surface of the sensing portion is covered with a film of a cured silicon polymer,

the silicone polymer of the cured silicon polymer film is represented by the following general formula



~~wherein~~

R1 and R2, which may be the same or different, are selected from the group consisting of an aryl, hydrogen, an aliphatic alkyl, and a functional group having an unsaturated bond,

R3, R4, R5, and R6, which may be the same or different, are selected from the group consisting of hydrogen, an aryl, an aliphatic alkyl, a trialkylsilyl, and a functional group having an unsaturated bond,

n is an integer and at least 1, and

the silicone polymer has a weight average molecular weight of not less than 1000.

5. (Previously Amended) The magnetoresistance sensor element according to Claim 3 wherein the silicone polymer is a photocured polymer.

6. (Previously Amended) The magnetoresistance sensor element according to Claim 4 wherein the silicone polymer is a photocured polymer.

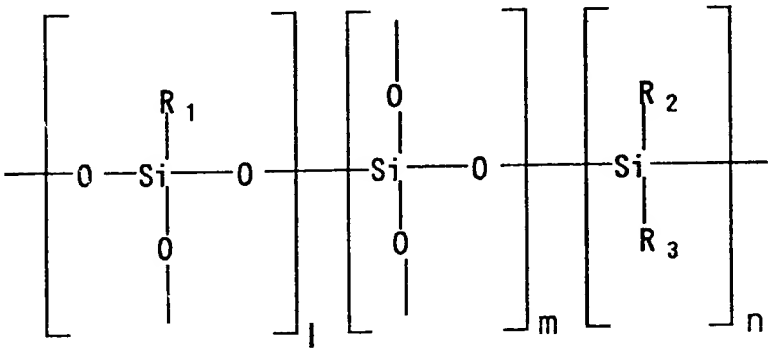
Claim 7 (Cancelled).

8. (Previously Amended) A method of fabricating a magnetoresistance sensor element comprising:

coating a sensing portion comprising slender wires supported by a sensor substrate with a solution of a silicone polymer; and

heating and curing the solution to form a silicone resin film on the sensing portion.

9. (Previously Amended) The method of fabricating a magnetoresistance sensor element according to Claim 8, wherein the silicone polymer is represented by the following gene+ral formula



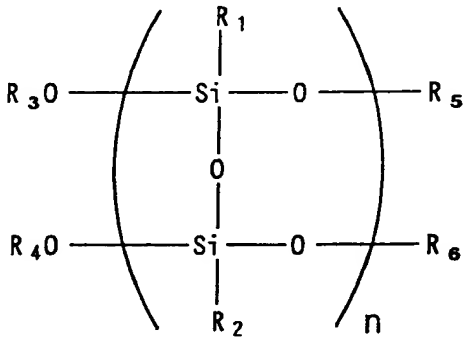
wherein

R1, R2, and R3, which may be the same or different, are selected from the group consisting of an aryl, hydrogen, an aliphatic alkyl, a hydroxyl, a trialkylsilyl, and a functional group having an unsaturated bond,

l, m, and n are integers and l + m + n is $\geq$ 1, and

the silicone polymer has a weight average molecular weight of not less than 1000.

10. (Previously Amended) The method of fabricating a magnetoresistance sensor element according to Claim 8, wherein the silicone polymer is represented by the following general formula



wherein

R1 and R2, which may be the same or different, are selected from the group consisting of an aryl, hydrogen, an aliphatic alkyl, and a functional group having an unsaturated bond,

R3, R4, R5, and R6, which may be the same or different, are selected from the group consisting of hydrogen, an aryl, an aliphatic alkyl, a trialkylsilyl, and a functional group having an unsaturated bond,

n is an integer and at least 1, and

the silicone polymer has a weight average molecular weight of not less than 1000.

11. (Previously Amended) The method of fabricating a magnetoresistance sensor element according to Claim 9 including curing the silicone polymer with light.

12. (Previously Amended) The method of fabricating a magnetoresistance sensor element according to Claim 10 including curing the silicone polymer with light.

13. (Previously Amended) The method of fabricating a magnetoresistance sensor element according to Claim 8 including curing the solution at a temperature from 100°C to 250°C.